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BRINKS HOFER GILSON & LIONE/PML			EXAMINER	
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CHICAGO, IL 60610				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/773,488	<b>Applicant(s)</b> VAN GORP ET AL.	
	<b>Examiner</b> Daniel P. Vetter	<b>Art Unit</b> 3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 40-79 and 81-85 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 40-66, 70, 71, 73-79 and 81-85 is/are rejected.
- 7) ☒ Claim(s) 67-69 and 72 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/1/2004, 7/1/2004, 5/7/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

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### DETAILED ACTION

1. Claims 1-85 were previously pending in this application. Claims 1-39 and 80 were cancelled in the response filed May 16, 2007. Claims 40-79 and 81-85 are currently pending in this application.

#### *Election/Restrictions*

2. Applicant's election without traverse of claims 40-79 and 81-85 in the reply filed on May 16, 2007 is acknowledged.

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

#### *Claim Objections*

4. Claim 44 is objected to because of the following informalities: for clarity and completeness, the acronym "MIPS" is preferably written out in full form at least on its first appearance in the claims. Appropriate correction is required.

5. Claim 56 is objected to because of the following informalities: "id" appears to be a typographical error. Appropriate correction is required.

#### *Claim Rejections - 35 USC § 112*

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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7. Claims 57, 59, 62, 65, 66, 70, and 71 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claims 57, 59, 62, 66, 70, and 71 recite only that the processor performs a "Flat Distribution," a "Weighted Distribution," a "Zeroing Distribution," a "Slicing Distribution," a "Slicing Distribution with Price Tiers," and a "Tiered Distribution," respectively.

Although these terms are explained in the specification, using the term and only the term does not properly put the public on notice as to what specifically would constitute infringement. Without a more specific recitation, it is unclear in light of the specification what limitations the claim actually contains. For the purposes of applying art, examiner has made a best effort to provide applicable references, but absent a more detailed claim recitation with a fully ascertainable scope, a thorough examination is impossible.

9. The term "substantially" in claim 65 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Specifically, it is not clear how equal the costs need to be to meet the limitations of the claim.

### *Claim Rejections - 35 USC § 102*

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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11. Claims 40-58, 73-79, and 81-85 are rejected under 35 U.S.C. 102(e) as being anticipated by Ellis, U.S. Pat. Pub. No. 2003/0009401 (Reference A of the attached PTO-892).

12. As per claim 40, Ellis teaches a rate engine for use in a utility distribution system, comprising: an input module operative to accept utility data, rate data and time data (§§ 0323-24), the time data including at least one logging interval (§ 0328); a processing module coupled with the input module and operative to compute at least one cost based on the utility data and rate data (§ 0323), the at least one cost being associated with the at least one logging interval (§ 0328); and an output module coupled with the processing module and operative to output the at least one cost (§ 0325).

13. As per claim 41, Ellis teaches the rate engine of claim 40 as described above. Ellis further teaches the rate data comprises a plurality of charges (§ 0326).

14. As per claim 42, Ellis teaches the rate engine of claim 41 as described above. Ellis further teaches the at least one logging interval comprises a plurality of logging intervals (§ 0328), and the at least one cost comprises a plurality of costs (§ 0326), wherein each of the plurality of costs is associated with one of the plurality of logging intervals (§ 0335), and the plurality of costs is outputted by the output module (§ 0325).

15. As per claim 43, Ellis teaches the rate engine of claim 42 as described above. Ellis further teaches a communication interface coupled with said input module and operative to receive said utility data from at least one measuring device via a network (§ 0312).

16. As per claim 44, Ellis teaches the rate engine of claim 43 as described above. Ellis further teaches the utility data comprises at least one of water data, gas data, air data, steam data, emissions data, bandwidth data, and MIPS data (§ 0383).

17. As per claim 45, Ellis teaches the rate engine of claim 43 as described above. Ellis further teaches the utility data comprises electrical data (§ 0383).

18. As per claim 46, Ellis teaches the rate engine of claim 43 as described above. Ellis further teaches the utility data comprises hypothetical data (§ 0334).

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19. As per claim 47, Ellis teaches the rate engine of claim 46 as described above. Ellis further teaches the hypothetical data represents at least one of data in the past, data in the future, data that has been scaled, data that has been shifted, data that has been estimated, and data that has been edited (§§ 0334).

20. As per claim 48, Ellis teaches the rate engine of claim 42 as described above. Ellis further teaches the plurality of logging intervals span a time period associated with bill to date (§§ 0331).

21. As per claim 49, Ellis teaches the rate engine of claim 48 as described above. Ellis further teaches the utility data comprises electrical data (§§ 0383).

22. As per claim 50, Ellis teaches the rate engine of claim 42 as described above. Ellis further teaches the plurality of logging intervals span a time period associated with more than one billing period (§§ 0336).

23. As per claim 51, Ellis teaches the rate engine of claim 50 as described above. Ellis further teaches the utility data comprises electrical data (§§ 0383).

24. As per claim 52, Ellis teaches the rate engine of claim 42 as described above. Ellis further teaches the plurality of logging intervals span a time period associated with more than one tariff (§§ 0330).

25. As per claim 53, Ellis teaches the rate engine of claim 42 as described above. Ellis further teaches the plurality of logging intervals span a time period associated with one billing period (§§ 0321), and further wherein the utility data comprises both electrical data and hypothetical data (§§ 0334).

26. As per claim 54, Ellis teaches the rate engine of claim 42 as described above. Ellis further teaches the rate data comprises at least one of one tariff, a plurality of tariffs and real time pricing (§§ 0330).

27. As per claim 55, Ellis teaches the rate engine of claim 42 as described above. Ellis further teaches the input module accepts meta data (§§ 0321) and the output module outputs the meta data with the plurality of costs (§§ 0339).

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28. As per claim 56, Ellis teaches the rate engine of claim 55 as described above.

Ellis further teaches the meta data further comprises at least one of a cost center identifier and a billing period id (§ 0340).

29. As per claim 57, Ellis teaches the rate engine of claim 42 as described above.

Ellis further teaches the processing module performs a Flat Distribution (§ 0278).

30. As per claim 58, Ellis teaches the rate engine of claim 42 as described above.

Ellis further teaches the processing module determines a spanning interval, the spanning interval having a plurality of spanning logging intervals; and distributes each of the plurality of charges evenly across the plurality of spanning logging intervals (§ 0278).

31. As per claim 73, Ellis teaches the rate engine of claim 42 as described above.

Ellis further teaches at least one of the plurality of charges is not billed on a logging interval basis (§ 0273).

32. As per claim 74, Ellis teaches the rate engine of claim 42 as described above.

Ellis further teaches the utility data comprises data for at least one resource (§ 0312), further wherein the processing module: varies the value of the at least one resource to create a plurality of hypothetical values (§ 0334); combines each of the plurality of hypothetical values with the rate data to create a plurality of hypothetical costs (§ 0334), wherein each of the plurality of hypothetical costs is associated with one of the plurality of hypothetical values (§ 0334); and outputs the plurality of hypothetical costs (§ 0334).

33. As per claim 75, Ellis teaches the rate engine of claim 74 as described above.

Ellis further teaches the processing module varies the value of the at least one resource by percentage increments (§ 0334).

34. As per claim 76, Ellis teaches the rate engine of claim 74 as described above.

Ellis further teaches the processing module varies the value of the at least one resource by unit increments (§ 0335).

35. As per claim 77, Ellis teaches the rate engine of claim 74 as described above.

Ellis further teaches the at least one logging interval comprises a plurality of logging

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intervals (¶ 0328), further wherein the processing module repeats for each logging interval the creating the hypothetical values (¶¶ 0344, 0360), the combining the plurality of hypothetical values with the rate data to create a plurality of hypothetical costs and outputting the plurality of hypothetical costs (¶ 0334).

36. As per claim 78, Ellis teaches the rate engine of claim 77 as described above. Ellis further teaches the utility data comprises a plurality of resource data (¶ 0312), further wherein the processing module repeats for each of the plurality of resource data (¶ 0360), repeating for each logging interval the creating the hypothetical values (¶¶ 0344, 0360), the combining the plurality of hypothetical values with the rate data to create a plurality of hypothetical costs and outputting the plurality of hypothetical costs (¶ 0344).

37. As per claim 79, Ellis teaches the rate engine of claim 78 as described above. Ellis further teaches the processing module identifies logging intervals where the hypothetical costs are sensitive to variations in the hypothetical values of the resource data (¶ 0344).

38. As per claim 81, Ellis teaches a system for calculating the per logging interval cost of a utility, comprising: means for accepting utility data, rate data and time data from a data source (¶¶ 0323-24), the rate data comprising a plurality of charges (¶ 0326), the time data comprising a plurality of logging intervals (¶ 0331); means for computing a plurality of costs based on the utility data and rate, each of the plurality of costs being associated with one of the plurality of logging intervals (¶ 0323); and means for outputting the plurality of costs (¶ 0325).

39. As per claim 82, Ellis teaches a system for calculating the per logging interval cost of a utility, the system comprising: a rate engine, the rate engine having: an input module operative to accept utility data, rate data and time data (¶¶ 0323-24), the rate data comprising a plurality of charges (¶ 0326), the time data comprising a plurality of logging intervals (¶ 0331); a processing module coupled with the input module and operative to compute a plurality of costs based on the utility data and rate, each of the



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plurality of costs being associated with one of the plurality of logging intervals (§ 0323); and an output module coupled with the processing module and operative to output the plurality of costs (§ 0325).

40. As per claim 83, Ellis teaches the system of claim 82 as described above. Ellis further teaches wherein the rate engine further comprises a communication interface coupled with said input module and operative to transmit said utility data to said input module (§ 0312).

41. As per claim 84, Ellis teaches the system of claim 83 as described above. Ellis further teaches a network coupled with said communication interface, and operative to transmit said utility data to said communication interface (§ 0312).

42. As per claim 85, Ellis teaches the system of claim 84 as described above. Ellis further teaches comprising a measuring device coupled with said network and operative to generate and transmit said utility data to said network (§ 0312).

*Claim Rejections - 35 USC § 103*

43. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

44. Claims 59-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis in view of Chasek, U.S. Pat. No. 5,237,507 (Reference B of the attached PTO-892).

45. As per claim 59, Ellis teaches the rate engine of claim 42 as described above. Ellis does not explicitly teach the processing module computes a Weighted Distribution; which is taught by Chasek (column 2, lines 19-22). It would have been prima facie

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obvious to one having ordinary skill in the art at the time of invention to incorporate the above teachings of Chasek in order to encourage efficient utility use (as taught by Chasek, Abstract).

46. As per claim 60, Ellis teaches the rate engine of claim 42 as described above. Ellis further teaches at least one of the plurality of charges comprises a penalty charge (§ 0342), and at least one of the plurality of charges comprises a usage charge (§ 0335) and further wherein the processing module determines a spanning interval, the spanning interval having a plurality of spanning logging intervals (§ 0278). Ellis does not explicitly teach the module calculates a percentage of the usage charge for each spanning logging interval; and distributes the penalty charge weighted according to the percentage of the usage charge; which is taught by Chasek (column 2, lines 15-22). It would have been prima facie obvious to one having ordinary skill in the art at the time of invention to incorporate the above teachings of Chasek in order to encourage efficient utility use (as taught by Chasek, Abstract).

47. As per claim 61, Ellis in view of Chasek teaches the rate engine of claim 60 as described above. Ellis further teaches the utility data comprises electrical data (§ 0383).

48. Claims 62-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis in view of Williams, Intl. Pat. Pub. No. WO 95/26065 (Reference N of the attached PTO-892).

49. As per claim 62, Ellis teaches the rate engine of claim 42 as described above. Ellis does not explicitly teach the processing module computes a Zeroing Distribution; which is taught by Williams (page 18). It would have been prima facie obvious to one having ordinary skill in the art at the time of invention to incorporate the above teachings of Williams into the rate engine taught by Ellis in order to compute values for sub periods (as taught by Williams, page 18).

50. As per claim 63, Ellis teaches the rate engine of claim 42 as described above. Ellis further teaches original utility data is associated with each of said plurality of

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logging intervals (§ 0312), and further wherein the processing module determines a spanning interval, the spanning interval having a plurality of spanning logging intervals (§ 0278); calculates a total cost associated with the spanning interval (§ 0323); and associates the one of said plurality of costs with the one of said plurality of logging intervals (§ 0323). Ellis does not teach the rate engine does the following, which are taught by Williams: sets utility data associated with one of said plurality of logging intervals to a value such that the cost of the utility data comprises zero for the one of said plurality of logging intervals (page 18); combines the utility data and rate date to create a temporary cost associated with the spanning interval (page 18, § 3); subtracts the temporary cost from the total cost to create one of said plurality of costs (page 19, § 4); resets the utility data associated with the one of said plurality of logging intervals to the original utility data (page 19, § 1); and repeats the setting, combining, subtracting and resetting for the remainder of each of said plurality of logging intervals (page 19, § 2). It would have been prima facie obvious to one having ordinary skill in the art at the time of invention to incorporate the above teachings of Williams into the rate engine taught by Ellis in order to determine charges for sub periods (as taught by Williams, page 17, § 4).

51. As per claim 64, Ellis in view of Williams teaches the rate engine of claim 63 as described above. Ellis further teaches the utility data comprises electrical data (§ 0383).

52. As per claim 65, Ellis in view of Williams teaches the rate engine of claim 63 as described above. Williams further teaches the processing module scales said plurality of costs (page 17, § 3). It would have been prima facie obvious to one having ordinary skill in the art at the time of invention to incorporate the above teachings of Williams into the rate engine taught by Ellis in view of Williams in order to account for loss (as taught by Williams, page 17, § 3). The limitation "so that the sum of said plurality of costs is substantially equal to said total cost" is a recitation of intended use and is only afforded patentable weight to the extent that it imparts structural limitations on the invention, which are met by Williams (page 17).

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53. Claims 66, 70, and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis in view of Liebl, et al., U.S. Pat. No. 5,289,362 (Reference C of the attached PTO-892).

54. As per claims 66, 70, and 71, Ellis teaches the rate engine of claim 42 as described above. Ellis does not explicitly teach the processing module computes a Slicing Distribution, a Slicing Distribution with Price Tiers, and a Tiered Distribution; which are taught by Liebl, et al. (column 1, line 66- column 2, line 9). It would have been prima facie obvious to one having ordinary skill in the art at the time of invention to incorporate the above teachings of Liebl, et al. into the rate engine taught by Ellis to allow a customer to minimize electric power costs (as taught by Liebl, et al.; column 1, lines 63-66).

*Allowable Subject Matter*

55. Claims 67-69 and 72 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

56. The following is a statement of reasons for the indication of allowable subject matter: the art of record does not teach or fairly suggest: the rate engine subtracts the running total cost from the temporary cost to create a slice cost; distributes the slice cost evenly among each interval in the assignment set; adds the slice cost to the running total cost; resets the assignment set by excluding all intervals where the associated resource usage is equal to or less than the lowest value; resets the lowest value to be equal to the lowest resource usage value among all intervals within the assignment set; resets the hypothetical data by setting the resource usage value for all intervals within the assignment set to be equal to the lowest value, and leaving all intervals not in assignment set at that interval's original resource usage value (as recited in claim 67); and the rate engine creates hypothetical data by setting the resource

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usage value for each interval to be equal to the lesser of the interval's original resource usage value and the price tier value; creates a total tier usage by adding together all hypothetical values; combines the hypothetical data and the rate data to create a temporary cost; distributes a portion of the temporary cost to each interval in the assignment set by dividing the hypothetical data for that interval by the total tier usage and multiplying by the temporary cost; resets the assignment set by excluding all intervals where the usage data was equal to or less than the price tier value; resets the hypothetical data by setting the resource usage value for each interval to be equal to the interval's original resource usage value; resets the total tier usage by adding together all hypothetical values and subtracting the previous total tier usage (as recited in claim 72).

### *Conclusion*

57. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Munster, U.S. Pat. Pub. No. 2004/0133529 (Reference D of the attached PTO-892) teaches a method wherein information of importance to the consumption and/or production of electricity, for example prognoses of prices, consumption or the like, is provided to one or more of said consumers, producers and/or suppliers, and said information is used to control production, delivery and/or consumption. Burke, et al., U.S. Pat. Pub. No. 2003/0158826 (Reference E of the attached PTO-892) teaches a utility processing system that includes a utility processor which accepts utility metering and pricing data as inputs, and outputs consumption decisions and usage and billing information. Gristina, et al., U.S. Pat. Pub. No. 2003/0135339 (Reference F of the attached PTO-892) teaches a system, method and medium for monitoring and managing the resource consumption and resource infrastructure of at least one building in real time that can be operated on by the analytical tools of the present invention to forecast future resource consumption and obtain resource market information; and also be used to feed back into the building

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resource management system of at least one building to control the resource states of the at least one building. Homeycutt, U.S. Pat. Pub. No. 2003/0055676 (Reference G of the attached PTO-892) teaches an Internet-based method for managing a utility by presenting allocated utility capacity to a customer, presenting a predicted load profile to a customer, presenting available utility capacity, and transferring available utility capacity between entities according to an established transfer policy; wherein the predicted load profile includes predicted utility consumption of the customer for each certain future period of time and is presented such that any variation between the allocated utility capacity and the predicted load profile is readily apparent. Kashti, U.S. Pat. Pub. No. 2002/0046197 (Reference H of the attached PTO-892) teaches a system which allows information to be transmitted from one or a number of utility providers to one of a number of customers, and vice versa; wherein the system allows the consumption of a utility in the premises to be collated and profiles created and utility usage to be allocated to the usage of specific apparatus in the premises. Williams, U.S. Pat. No. 6,351,737 (Reference I of the attached PTO-892) teaches a system wherein the rate of consumption from one or more values of metered consumption is determined by: (1) a value of consumption or charge therefrom using a period other than the Metered Period (the period during which the value of consumption was recorded), (2) aggregating values of rate of consumption corresponding to a plurality of metered locations, and (3) producing aggregate values of consumption or charge therefrom. Oravetz, et al., U.S. Pat. No. 6,021,401 (Reference J of the attached PTO-892) teaches a database for storing energy usage values and time values; a PC software logging routine for acquiring the values of energy consumed from the electric power system by the load, for determining corresponding time values for times at which the energy was consumed by the load, and for storing the energy usage values and time values in the database; and a PC software calculation routine for retrieving a predetermined count plus one of pairs of those values from the database, with one of the time values corresponding thereto being about equal to the predetermined time. Grisham, U.S. Pat.

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No. 6,020,734 (Reference K of the attached PTO-892) teaches a controller that determines a list of highest demands using event-triggered windows of time to ensure that only one of the entries on the list corresponds to any one high consumption event; and that generates a demand value corresponding to the quantity of energy consumed within a demand interval, and then determines whether the demand value for the demand interval is greater than a smallest demand value on a list of highest demands in a memory location. Pettis, U.S. Pat. No. 4,630,211 (Reference L of the attached PTO-892) teaches a system in which a home consumer immediately knows the cost of his current electrical bill as the electrical energy is being consumed and also the current cost per hour at which the energy is being consumed so that he can take steps to reduce the usage or otherwise conserve as he desires. Kusui, et al., U.S. Pat. No. 4,162,530 (Reference M of the attached PTO-892) teaches an integrating watt-hour meter which integrates the power consumed by the customer and generates a pulse signal for each unit of consumed power, a timer responsive to the output of the integrating watt-hour meter for producing a time signal corresponding to a predetermined rate calculating interval, a multi-rate calculating unit responsive to the timer signal and the pulse signal for independently calculating a plurality of operation rate elements an electric switch for supplying power to the customer, a rate detection selection unit including a rate detection member, a multi-rate calculation function unit including a plurality of elements which are set with various parameters regarding tax and rate and adapted to be combined with the multi-rate calculating unit for calculating the rate, and a rate function unit including a rate element set with an amount of power corresponding to the amount of purchased power and adapted to be combined with the rate selection detection unit for producing a rate signal corresponding to the purchased amount of power. Byman, et al., *Using Distributed Power Quality Monitoring for Better Electrical System Management*, IEEE TRANSACTIONS ON INDUSTRY APPLICATIONS, Vol. 36, No. 5, Sept./Oct. 2000, 1481-1485 (Reference U of the attached PTO-892) teaches a distributed metering and monitoring system designed to allow a user to keep


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organizational costs down in a deregulated electricity market. Tatum, *Energy Information: The Internet Connection*, BUILDING OPERATING MANAGEMENT, Sept. 2001 (Reference V of the attached PTO-892) teaches smart electric meters that allow for Internet energy information management.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel P. Vetter whose telephone number is (571) 270-1366. The examiner can normally be reached on Monday through Thursday from 8am to 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on (571) 272-6708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
JOHN W. HAYES  
SUPERVISORY PATENT EXAMINER